

Appl. No. 10/649,580  
Amdt. dated March 28, 2005  
Reply to Office Action of December 3, 2004

PATENT

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an exclusive OR gate coupled to two of the shift registers.

Claim 12. (original) The disk drive system as defined in claim 11 wherein the exclusive OR gate performs an exclusive OR function on a first differential digital bit generated at a positive output of the buffer in a current clock cycle, and a second differential digital bit generated at a negative output of the buffer in a previous clock cycle.

Claim 13. (original) The disk drive system as defined in claim 8 wherein the direction patterns are stored on the magnetic recording media before servo samples.

Claim 14. (original) The disk drive system as defined in claim 8 wherein the pattern is 11011.

Claim 15. (currently amended) A disk drive system for reading magnetic recording media, the disk drive system comprising:  
means for writing direction patterns on data tracks of a magnetic disk between a data sector and a servo sector and reading the direction patterns to generate a polarity signal;  
means for determining if the polarity signal matches a first pattern; and  
means for reversing the polarity of signals generated by reading data on the data tracks if the polarity signal matches the first pattern.

Claim 16. (original) The disk drive system as defined in claim 15 wherein the means for determining compares the polarity signal to a second pattern that indicates the means for writing and reading has not reversed polarity.

Claim 17. (original) The disk drive system as defined in claim 16 wherein a tolerance between the first pattern and the second pattern is 8 bits.

Claim 18. (original) The disk drive system as defined in claim 15 wherein the means for determining comprises:  
means for generating differential digital bits in response to the polarity signal; and  
means for performing an exclusive OR function on the differential digital bits.

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Claim 19. (original) The disk drive system as defined in claim 18 wherein the means for performing the exclusive OR functions performs the exclusive OR function on a first differential digital bit generated in a current clock cycle and a second differential digital bit generated in a previous clock cycle.

Claim 20. (original) The disk drive system as defined in claim 15 wherein the first pattern is 11011.